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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,539	07/24/2003	Toshihiro Ise	Q76566	8202

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EXAMINER

YAMNITZKY, MARIE ROSE

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,539

Applicant(s)

ISE ET AL.

Examiner

Marie R. Yamnitzky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/697,157.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date rec'd 24 July 2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The first foreign application for patent or inventor's certificate on which priority is claimed is listed with a filing date of 28/October/1999, but the filing date shown on the certified copy of this priority document is 27/October/1999.

(The present application was filed with a copy of the original executed declaration filed in parent application 09/697,157. During prosecution of the parent application, a substitute declaration was filed to correct the filing date listed for the first foreign priority application.)

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it is too long, it includes language which can be implied, formula (IB) as shown in the abstract is different than formula (IB) as

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shown elsewhere in the application, and the variables defined after formula (IB) are not found in either formula shown in the abstract. Correction is required. See MPEP § 608.01(b).

4. Claims 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11, with claims 12 and 13 dependent directly or indirectly therefrom: There is no antecedent basis for R_{11} and R_{12} . Presuming Q as shown in claim 10 is the combination of R_{11} and R_{12} , claim 11 does not further limit claim 10. The examiner suggests cancelling claim 11 and amending claim 12 to depend from claim 10.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 10, 11, 14, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Denny et al. (US 5,968,933).

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The compounds made according to Scheme 5 and Scheme 6 of the patent to Denny et al. are compounds of formula (IIA) as defined in present claims 10, 11, 14, 18 and 19 wherein each of R₁₃, R₁₄, R₁₅ and R₁₇ represents a hydrogen atom, R₁₆ represents a substituent (a heterocyclic group), L₁ represents a connecting group (an alkylene group), and Q represents an atomic group necessary for forming a 5-membered ring with N.

7. Claims 10-12 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Krasovitskii et al. in *Zhurnal Vsesoyuznogo Khimicheskogo Obshchestva im. D. I. Medeleeva* (1983) (see 1984:6392 HCAPLUS).

The prior art compounds of formulae I and II are compounds of formula (IIA) as defined in present claims 10-12 and 18-20 wherein each of R₁₄, R₁₅, R₁₆ and R₁₇ represents a hydrogen atom, R₁₃ and L₁ combine with each other to form a ring, and Q represents an atomic group necessary for forming a 6-membered ring with N (specifically, a morpholine group).

8. Claims 10, 11 and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Krasovitskii et al. in *Khimiya Geterotsiklicheskikh Soedinenii* (1982) (see 1983:34527 HCAPLUS).

The prior art compound of formula II is a compound of formula (IIA) as defined in present claims 10 and 18-20 wherein each of R₁₄, R₁₅, R₁₆ and R₁₇ represents a hydrogen atom, R₁₃ and L₁ combine with each other to form a ring, and Q represents an atomic group necessary for forming a 5-membered ring with N.

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9. Claims 1, 2 and 5-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Nii et al. (US 6,379,823 B1).

The prior art compound represented by formula 2-20 in column 24 of the patent is a compound of formula (IA) as defined in present claims 1 and 5-9 wherein each of R_{11} , R_{12} and R_{13} represents an aliphatic hydrocarbon group (an alkyl group), each of R_{14} , R_{15} , R_{16} and R_{17} represents a hydrogen atom, and L_1 represents a connecting group (a divalent heterocyclic group).

The prior art compound represented by formula 2-20 is disclosed for use in a light emitting device of the structure set forth in present claim 1, and may be used in combination with a polymer as required by present claim 2. For example, see column 4, lines 12-25.

10. Claims 1, 2, 8 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Okada et al. (US 6,458,474 B1).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The compound represented by formula 18A in column 18 of the patent is a compound of formula (IA) as defined in present claims 1, 8 and 9 wherein each of R_{13} , R_{14} , R_{15} , R_{16} and R_{17}

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represents a hydrogen atom, and R_{11} and L_1 and R_{12} and L_1 combine with each other to form a ring.

The prior art compound represented by formula 18A is disclosed for use in a light emitting device of the structure set forth in present claim 1, and may be used in combination with a polymer as required by present claim 2. For example, see column 4, lines 46-63.

11. Claims 1-15 and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Yanagi et al. (US 6,440,586 B1).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Each of the compounds represented by formulae 1-16, 19-22, 24-37, A-1-A-4, A-9, A-17, A-18 and A-20-A-34 in columns 13-27 is a compound of formula (IA) as defined in present claim 1 and claims dependent therefrom. Some of these compounds also are compounds of formula (IIA) as defined in present claim 10 and claims dependent therefrom.

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For example, the compound represented by formula 1 in column 13 is a compound of formula (IA) as defined in present claims 1, 8 and 9 wherein each of R_{11} and R_{12} represents an aliphatic hydrocarbon group, each of R_{14} , R_{15} , R_{16} and R_{17} represents a hydrogen atom, and R_{13} and L_1 combine with each other to form a ring.

As another example, the compounds represented by formulae 3 and 4 in c. 13 are compounds of formula (IA) as defined in present claims 1, 8 and 9 wherein each of R_{14} , R_{15} , R_{16} and R_{17} represents a hydrogen atom, R_{11} and L_1 combine with each other to form a ring, R_{12} and L_1 combine with each other to form a ring, and R_{13} and L_1 combine with each other to form a ring.

The compounds represented by formula 22 in c. 17 and formulae 34-37 in c. 19-20 are examples of compounds of formula (IA) as defined in present claims 1, 3, 8 and 9, and compounds of formula (IIA) as defined in present claims 10, 11 and 18-20. The compounds represented by formulae 22, 34, 36 and 37 further meet the limitations of the compound as defined in present claims 4 and 12, and the compounds represented by formulae 22, 36 and 37 further meet the limitations of the compound as defined in present claim 13 (noting that the possibilities recited in claims 4, 12 and 13 are not restricted from being substituted).

The compound represented by formula A-3 in c. 21 is an example of a compound of formula (IA) as defined in present claims 1 and 5-9 wherein each of R_{11} , R_{12} and R_{13} represents an aryl group, each of R_{14} , R_{15} , R_{16} and R_{17} represents a hydrogen atom, and L_1 represents a connecting group (a divalent heterocyclic group).

The compounds represented by formulae A-23-A-27 in c. 25-26 are examples of compounds of formula (IA) as defined in present claims 1, 3, 5, 6, 8 and 9, and compounds of formula (IIA) as defined in present claims 10, 11, 14, 15 and 18-20. The compounds represented by formulae A-23-A-26 further meet the limitations of the compound as defined in present claims 4 and 12, and the compounds represented by formulae A-25 and A-26 further meet the limitations of the compound as defined in present claim 13 (noting that the possibilities recited in claims 4, 12 and 13 are not restricted from being substituted).

The prior art compounds are disclosed for use in a light emitting device of the structure set forth in present claim 1, and may be used in combination with a polymer as required by present claim 2. For example, see column 4, lines 48-60.

12. Claims 1, 2 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Nii (US 6,537,687 B1).

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

The compounds represented by formulae (D-41) and (D-42) in columns 40-41 of the patent are compounds of formula (IA) as defined in present claims 1 and 7-9 wherein each of R_{11} , R_{12} and R_{13} represents an aryl group, each of R_{14} , R_{15} , R_{16} and R_{17} represents a hydrogen atom, and L_1 represents a connecting group.

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The compound represented by formulae (D-45) in column 42 of the patent is a compound of formula (IA) as defined in present claims 1 and 7 wherein each of R_{11} , R_{12} and R_{13} represents an aryl group, each of R_{14} and R_{17} represents a hydrogen atom, R_{15} and R_{16} combine with each other to form a ring, and L_1 represents a connecting group.

The prior art compounds represented by formulae (D-41), (D-42) and (D-45) are disclosed for use in a light emitting device of the structure set forth in present claim 1, and may be used in combination with a polymer as required by present claim 2. For example, see column 41, lines 50-61 and c. 44, l. 38-65.

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagi et al. (US 6,440,586 B1) as applied to claims 1-15 and 18-20 above, and for the further reasons set forth below.

The compounds of formulae A-23-A-27 in c. 25-26 are examples of compounds of formula (IIA) as defined in claim 10 wherein R_{13} represents a hydrogen atom. Yanagi et al. do not provide any specific examples of compounds of formula (IIA) wherein R_{13} represents an alkyl, aryl or aromatic heterocyclic group as required by present claims 16 and 17.

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It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention to make compounds similar to the specific compounds disclosed by Yanagi et al. with the expectation that compounds similar in structure would have similar properties and could be used for the same purpose as the specifically disclosed compounds. Yanagi et al. disclose compounds having a benzimidazole group with hydrogen, an alkyl group or an aryl group at the position corresponding to present R₁₃. For example, see A-1, A-2 and A-3 in c. 20-21. These compounds do not meet the limitations of a compound of present formula (IIA) because they do not have the ring formed between Q and N, but these compounds would suggest to one of ordinary skill in the art at the time of the invention that the –NH– in the benzimidazole group of the compounds of formulae A-23-A-27 could be replaced with –NR– wherein R is an alkyl or aryl group.

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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16. Claims 1-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,440,586 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because there is substantial overlap between the compounds of formulae (I), (I-a), (III) and (I') as defined for the luminous device of the patented claims and the compounds of formulae (IA) and (IIA) as defined in the present claims, and the compound of formula (IA) as defined in present claim 1 is generic for the compounds of formula (I-a) as defined in the patented claims.

17. Miscellaneous:

Claim 1, line 5: "comound" should read --compound--.

Claim 12, line 3: "pyyrole" should read --pyrrole--.

Claim 13, line 1: "th 5-" should read -- the 5- --.

Claim 14, line 2: "form" should read --from--.

Claim 15, line 1: "a" should read --an--.

18. Any inquiry concerning this communication should be directed to Marie R. Yamnitzky at telephone number (571) 272-1531. The examiner works a flexible schedule but can generally be reached at this number from 6:30 a.m. to 4:00 p.m. Monday, Tuesday, Thursday and Friday, and every other Wednesday from 6:30 a.m. to 3:00 p.m.

The current fax number for Art Unit 1774 is (703) 872-9306 for all official faxes. (Unofficial faxes to be sent directly to examiner Yamnitzky can be sent to (571) 273-1531.)

MRY
March 11, 2005



MARIE YAMNITZKY
PRIMARY EXAMINER

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